Applicant: Shunpei Yamazaki et al.

Attorney's Docket No.: 07977-126004
Serial No.: 10/647 539

Client Reference No. US3269/3270D1D1D1

Serial No.: 10/647,539 Filed: August 26, 2003

Page : 2 of 10

## Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

## Listing of Claims:

Claims 1-42. (Cancelled)

- 43. (Previously Presented) A dynamic random access memory comprising:
- a substrate;
- an insulating film over the substrate;
- at least one word line;
- at least one bit line intersecting perpendicularly to the word line;
- a crystalline semiconductor film comprising silicon at an intersection of the word line and the bit line, formed on the insulating film;
  - an interlayer insulating film on the crystalline semiconductor film; and
- an electrode over a drain region of the crystalline semiconductor film with the interlayer insulating film interposed therebetween,

wherein the insulating film has at least one asperity of less than 30Å in height on the upper surface thereof.

- 44. (Previously Presented) A dynamic random access memory according to claim 43, wherein the dynamic random access memory further comprises a gate insulating film on the crystalline semiconductor film and a gate electrode on the gate insulating film.
- 45. (Previously Presented) A dynamic random access memory according to claim 43, wherein the insulating film comprises silicon oxide.

Applicant: Shunpei Yamazaki et al.

Serial No.: 10/647,539

Attorney's Docket No.: 07977-126004

Client Reference No. US3269/3270D1D1D1

Serial No.: 10/647,539 Filed: August 26, 2003

Page : 3 of 10

46. (Currently Amended) An electronic appliance comprising the dynamic random access memory according to claim 43, wherein the electronic appliance is selected from the group consisting of a TV camera, a head-mount display, a car navigation system, a projection display, a video camera, a personal computer, and a cellular telephone.

47. (New) A dynamic random access memory comprising:

a substrate;

an insulating film over the substrate, the insulating film having at least one asperity of less than 30 Å in height on the upper surface thereof;

a crystalline semiconductor film comprising silicon and formed on the insulating film; an interlayer insulating film on the crystalline semiconductor film; and

an electrode over a drain region of the crystalline semiconductor film with the interlayer insulating film interposed therebetween,

wherein the asperity has a width more than 100 Å.

- 48. (New) A dynamic random access memory according to claim 47, wherein the dynamic random access memory further comprises a gate insulating film on the crystalline semiconductor film and a gate electrode on the gate insulating film.
- 49. (New) A dynamic random access memory according to claim 48, wherein the insulating film comprises silicon oxide.
- 50. (New) A dynamic random access memory according to claim 48, wherein crystals of the crystalline semiconductor film extend in parallel with the insulating film.
- 51. (New) An electronic appliance comprising the dynamic random access memory according to claim 48, wherein the electronic appliance is selected from the group consisting of a

Applicant: Shunpei Yamazaki et al.

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Attorney's Docket No.: 07977-126004

Client Reference No. US3269/3270D1D1D1

Serial No.: 10/647,539 Filed: August 26, 2003

Page : 4 of 10

TV camera, a head-mount display, a car navigation system, a projection display, a video camera, a personal computer, and a cellular telephone.

52. (New) A dynamic random access memory comprising:

a substrate;

an insulating film over the substrate, the insulating film having at least one asperity of less than 30 Å in height on the upper surface thereof;

a crystalline semiconductor film comprising silicon and formed on the insulating film; an interlayer insulating film on the crystalline semiconductor film; and

an electrode over a drain region of the crystalline semiconductor film with the interlayer insulating film interposed therebetween,

wherein crystals of the crystalline silicon semiconductor film extend in parallel with the insulating film.

- 53. (New) A dynamic random access memory according to claim 52, wherein the dynamic random access memory further comprises a gate insulating film on the crystalline semiconductor film and a gate electrode on the gate insulating film.
- 54. (New) A dynamic random access memory according to claim 52, wherein the insulating film comprises silicon oxide.
- 55. (New) A dynamic random access memory according to claim 52, wherein the asperity has a width more than 100 Å.
- 56. (New) An electronic appliance comprising the dynamic random access memory according to claim 52, wherein the electronic appliance is selected from the group consisting of a TV camera, a head-mount display, a car navigation system, a projection display, a video camera, a personal computer, and a cellular telephone.

Applicant : Shunpei Yamazaki et al.

Serial No. : 10/647,539

Attorney's Docket No.: 07977-126004

Client Reference No. US3269/3270D1D1D1

Filed : August 26, 2003

Page : 5 of 10

57. (New) A static random access memory comprising:

a substrate;

an insulating film over the substrate;

at least one word line;

at least one bit line intersecting perpendicularly to the word line;

at least one thin film transistor comprising silicon at an intersection of the word line and the bit line, formed on the insulating film;

an interlayer insulating film over the thin film transistor; and

a polysilicon film over the interlayer insulating film, the polysilicon film electrically connected with a drain region of the thin film transistor,

wherein the insulating film has at least one asperity of less than 30 Å in height on the upper surface thereof.

- 58. (New) A static random access memory according to claim 57, wherein the static random access memory further comprises a gate insulating film on the crystalline semiconductor film and a gate electrode on the gate insulating film.
- 59. (New) A static random access memory according to claim 57, wherein the insulating film comprises silicon oxide.
- 60. (New) An electronic appliance comprising the static random access memory according to claim 57, wherein the electronic appliance is selected from the group consisting of a TV camera, a head-mount display, a car navigation system, a projection display, a video camera, a personal computer, and a cellular telephone.
  - 61. (New) A static random access memory comprising: a substrate;

Applicant: Shunpei Yamazaki et al.

Attorney's Docket No.: 07977-126004
Serial No.: 10/647.539

Client Reference No. US3269/3270D1D1D1

Serial No.: 10/647,539 Filed: August 26, 2003

Page : 6 of 10

an insulating film over the substrate, the insulating film having at least one asperity of less than 30 Å in height on the upper surface thereof; and

at least one thin film transistor comprising silicon and formed on the insulating film; an interlayer insulating film over the thin film transistor;

a polysilicon film over the interlayer insulating film, the polysilicon film electrically connected with a drain region of the thin film transistor; and

wherein the asperity has a width more than 100 Å.

- 62. (New) A static random access memory according to claim 61, wherein the static random access memory further comprises a gate insulating film on the crystalline semiconductor film and a gate electrode on the gate insulating film.
- 63. (New) A static random access memory according to claim 61, wherein the insulating film comprises silicon oxide.
- 64. (New) A static random access memory according to claim 61, wherein crystals of the crystalline semiconductor film extend in parallel with the substrate.
- 65. (New) An electronic appliance comprising the static random access memory according to claim 61, wherein the electronic appliance is selected from the group consisting of a TV camera, a head-mount display, a car navigation system, a projection display, a video camera, a personal computer, and a cellular telephone.
  - 66. (New) A static random access memory comprising:

a substrate;

an insulating film over the substrate, the insulating film having at least one asperity of less than 30 Å in height on the upper surface thereof;

at least one thin film transistor comprising silicon and formed on the insulating film;

Applicant: Shunpei Yamazaki et al.

Attorney's Docket No.: 07977-126004
Serial No.: 10/647.539

Client Reference No. US3269/3270D1D1D1

Serial No.: 10/647,539 Filed: August 26, 2003

Page : 7 of 10

an interlayer insulating film over the thin film transistor;

a polysilicon film over the interlayer insulating film, the polysilicon film electrically connected with a drain region of the thin film transistor; and

wherein crystals of the crystalline silicon semiconductor film extend in parallel with the substrate.

- 67. (New) A static random access memory according to claim 66, wherein the static random access memory further comprising a gate insulating film on the crystalline semiconductor film and a gate electrode on the gate insulating film.
- 68. (New) A static random access memory according to claim 66, wherein the insulating film comprises silicon oxide.
- 69. (New) A static random access memory according to claim 66, wherein the asperity has a width more than 100 Å.
- 70. (New) An electronic appliance comprising the static random access memory according to claim 66, wherein the electronic appliance is selected from the group consisting of a TV camera, a head-mount display, a car navigation system, a projection display, a video camera, a personal computer, and a cellular telephone.
- 71. (New) A semiconductor device having at least a static random access memory, the static random access memory comprising:
  - a word line over a substrate;
  - a bit line intersecting perpendicularly to the word line, over the substrate; and
  - at least a first thin film transistor and a second thin film transistor over the substrate;
- wherein a gate electrode of the first thin film transistor is connected to a source or drain region of the second thin film transistor,

Applicant: Shunpei Yamazaki et al.

Attorney's Docket No.: 07977-126004
Serial No.: 10/647.539

Client Reference No. US3269/3270D1D1D1

Serial No.: 10/647,539 Filed: August 26, 2003

Page : 8 of 10

wherein a gate electrode of the second thin film transistor is connected to a source or drain region of the first thin film transistor, and electrically connected to the bit line,

each of the first and second thin film transistors comprising:

a crystalline semiconductor film comprising silicon on an insulating film, wherein the insulating film has at least one asperity of less than 30 Å in height on the upper surface thereof.

- 72. (New) A semiconductor device having at least a static random access memory according to claim 71, wherein the static random access memory further comprising:

  a first resistor connected to a source or drain region of the first thin film transistor;
  a second resistor connected to a source or drain region of the second thin film transistor.
- 73. (New) A semiconductor device having at least a static random access memory according to claim 71, wherein the static random access memory further comprising:
- a third thin film transistor provided between a source or drain region of the first thin film transistor and the bit line; and
- a fourth thin film transistor provided between a source or drain region of the second thin film transistor and the word line,

wherein gate electrodes of the third and fourth thin film transistor are connected to the word line.

- 74. (New) A semiconductor device having at least a static random access memory according to claim 71, wherein the insulating film comprises silicon oxide.
- 75. (New) A semiconductor device having at least a static random access memory according to claim 71, wherein the asperity has a width more than 100 Å.

Applicant: Shunpei Yamazaki et al.

Serial No.: 10/647,539 Filed: August 26, 2003

Page : 9 of 10

Attorney's Docket No.: 07977-126004 Client Reference No. US3269/3270D1D1D1

76. (New) A static random access memory according to claim 71, wherein crystals of the crystalline semiconductor film extend in parallel with the substrate.

77. (New) An electronic appliance comprising the semiconductor device having at least a static random access memory according to claim 71, wherein the electronic appliance is selected from the group consisting of a TV camera, a head-mount display, a car navigation system, a projection display, a video camera, a personal computer, and a cellular telephone.